

Office Memorandum • UNITED STATES GOVERNMENT

TO : Planning and Review Staff
ATTN : [REDACTED] 25X1A
THRU : Chief, Materials Division
FROM : Chief, Food and Agriculture Branch

DATE: 11 September 1957

SUBJECT: Transmittal of declassified version of ORR Project No. 21.1980 and
ORR Project No. 21.1977

1. Attached are declassified copies of ORR Project No. 21.1980, "Recent Developments in Polish and Chinese Agriculture," and ORR Project No. 21.1977, "A Comparison of Per Capita Food Availability in Russia, 1913 and 1956."

2. These declassified versions have been prepared at the request of, and according to the instructions of, [REDACTED]

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Recent Developments in Chinese Agriculture

The most basic institutional development in the Chinese countryside during the past few years has been the transition of privately operated peasant holdings into socialized organizations. After the speech of Mao Tse-tung in July, 1955, the pace of the socialization of agriculture increased rapidly, so that by the end of November, 1956, 96 percent of all agricultural households were reported to be in either "high-stage" or "low-stage" cooperatives, of which about 83 percent were in some 488,000 high-stage cooperatives (collective farms). By early 1957 this proportion was reported to be over 90 percent.

Peasants generally have been dissatisfied with being herded into agricultural cooperatives but there are as yet no valid indications that dissatisfaction in itself has had a seriously adverse effect on crop production. There have been sharp decreases in livestock numbers, especially hogs and draft animals. In addition peasant handicraft production has suffered. The livestock shortage in particular has reached alarming proportions and has become a source of major concern to the authorities. This concern has resulted in leading to the granting of concessions to the collective farm members in order to improve the situation.

With only 2 percent of the total cultivated area of China cultivated by tractors in 1956, the importance of draft animals is obvious. There has, however, been a sharp drop in major livestock numbers in many areas since 1954. Among causes for the decline were shortages of feed, overwork, poor care, and indiscriminate slaughtering by peasants. Upon entering agricultural producer cooperatives many peasants slaughtered their livestock rather than sell them to the cooperative

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at confiscatory prices.

The alarming decline in draft animal power was recognized in a joint directive of the Communist Party Central Committee and the State Council in March, 1957. The directive called for increased prices for livestock and livestock products, increased availability of fodder, and for the care of major livestock in cooperatives to be relegated only to the most qualified members. Increases in livestock numbers should result if these programs are widely implemented. An increase in the availability of draft animals should favorably affect production, permitting better and more timely plowing, planting, cultivation and harvesting.

The decrease in hog population has also reached alarming proportions, dropping from a reported 131 million in 1954 to 84 million in 1956. The rapid drop in hog numbers over the past few years has seriously reduced rural as well as urban food stocks and has created hardships in meeting export requirements. Several directives have been issued jointly by the Central Committee of the Chinese Communist Party and the State Council in attempts to stem the downward trend. In July, 1956, hog-raisers were granted "private ownership, private care, and public assistance" and, in early 1957, further steps were ordered. These measures included the increasing of acreage under fodder crops; increased dependence on rural rather than on urban grain and oilseed processing facilities, in order to provide the peasants easier access to by-product feed supplies; and the raising of hog procurement and market prices.

In June, 1957, the maximum private land holdings of cooperative members was raised from 5 percent to 10 percent of the total acreage of the cooperative, with the actual amount of land retained by any household to depend upon the number of

It seems likely that creation of better conditions and higher incentives will bring about an increase in hog numbers and an improved situation of pork availability.

Other problems have arisen on cooperatives causing concern and action in the upper Party and State echelons. For examples, the State took advantage of the new pool of off-season labor on cooperatives for use in rural construction projects. The result was a falling off of side-line handicraft production and a consequent lowering of peasant incomes.

This problem was further aggravated by the freezing of members' funds to increase the source of capital available to cooperatives. To correct these abuses, in 1957 the State increased its share of investment capital for rural reconstruction projects and prohibited the freezing of members' funds. Supply-and-marketing cooperatives were ordered to buy more side-line products; advanced purchasing was expanded and the peasants were assured more free time.

Irrigation - One of the most effective means for increasing unit-yields of crops in China is to increase the use and efficiency of irrigation. The current Chinese practice in the construction of local irrigation facilities is to use the cooperatives' labor and simple hand tools for a large part of the work.

During the First Five-Year Plan it was planned to increase irrigated area by 4.8 million hectares, of which 3.5 million hectares will be under rice; 0.3 million hectares under other grain crops; and 1.0 million hectares under cotton. If the plan is fulfilled and weather conditions are favorable, increased production resulting directly from expanded irrigation facilities should reach some 5 million metric tons of rice and 125,000 metric tons of cotton.

Chemical Fertilizer - Night soil has kept the soils of China fertile for centuries but cannot supply the requirements needed to increase yields substantially. The soils of China are generally deficient in nitrogen, a situation which could be improved by the use of large quantities of commercial nitrogenous fertilizers. The Chinese have stated their desired annual consumption of chemical nitrogenous fertilizers to be 20 million tons, present usage is only about 10 percent of this amount.

The limited supplies of fertilizer which are available to the cooperatives are allocated on a crop priority basis, with rice fields receiving the greatest share. Cotton, corn, and tobacco also receive considerable amounts of fertilizer.

The response of rice to added increments of nitrogenous fertilizers is high and it is estimated that by 1957 the annual increase in grain production (over 1952) directly resulting from the application of chemical fertilizers will be over 4 million tons, or approximately 2 percent of the estimated grain production for that year.

Mechanization - Mechanization has not yet reached significant proportions in Communist China. By 1957, according to the plan, there were to be only 290 MTS and 141 "mechanized state farms", with a total of 13,546 tractors.* To realize

* Tractor numbers are in terms of 15 h.p. units.

how relatively insignificant this effort is, the experience of 1956 can be cited: wherein 11,192 tractors cultivated, only 1.3 million hectares, or 1.2 percent of the total cultivated area of Communist China.

Although optimistic plans call for mechanizing nearly one-half of the total cultivated land by 1967, the last year of the 3rd Five Year Plan, as of the beginning of 1957, all tractors had been imported. It is unlikely that the Chinese Communists will be able to import or manufacture enough tractors to provide an estimated required park of 460,000 in 1967.

The use of tractors in China would be more effective in the non-rice producing areas of Manchuria and in the North and Northwest regions than in the predominantly rice growing areas further south. It is doubtful whether the cultivation of China's most important crop, rice, could be economically adopted to machinery in the near future. Machinery could be especially useful in reclamation work where conditions are harsh and feed not available.

Agricultural Investment - The agricultural sector of the Communist Chinese economy is not only expected to feed the enormous Chinese population but it is also charged with furnishing raw materials for light industries. In addition, exports of agricultural products bring in the foreign exchange credits needed to build up both heavy and light industries.

Agriculture, however, is neglected in regard to investment, receiving a share of only 5.8 percent of total investment during the First Five-Year Plan as compared to industry's 58.2 percent, and a planned 8.2 percent compared to industry's 60 percent during the 2nd Five Year Plan. Much of the investment available to the

countryside is derived directly from the peasants labor and through state loans.

State funds are spent primarily on water conservation projects with relatively little used for land reclamation, setting up state farms, mechanization, or the improvement of agricultural techniques. These latter programs are largely locally financed.

The primary purpose of most large-scale water conservation projects is flood control, the improvement of navigation and the development of hydro-electric power. During the First Five-Year Plan about 75 percent of the increase in irrigated area was made possible through the work of cooperative members.

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Project ZL330

21.1980

IP-552

Changes in Polish Agricultural Policy and Their Effect Upon Production

Unlike the USSR and other European Satellites, Poland in 1953 did not make concessions to the peasants that could be labelled as peasant incentives to increase agricultural production, e. g., lower compulsory delivery quotas, de-collectivisation, increases in prices paid, etc. "New Course" measures were designed more to improve the economic status of the socialized farming sector rather than the private sector which controlled some 80 percent of the agricultural land. Increases in the inputs necessary to improve agricultural productivity on a short term basis, e. g., machinery, labor and fertilizer continued to be allocated to the socialist sector despite their inefficient use by this sector. Any increase in crop yields that occurred in 1954 and 1955 over 1953 were primarily the direct result of favorable weather. Per hectare yields of major crops did not change much in the period 1951-1955 as compared to 1946-1950 and remained below the prewar average 1934-1938, see Table 1.

Table 1

Yields of Major Crops in Poland, 1934-38 Average
1946-50 Average and 1951-55 Average

Time Period	Wheat	Rye	Barley	Oats	Potatoes	Sugar Beets
----- Quintals/hectare -----						
1934-1938	14.6	12.8	15.7	14.5	138	265
1946-1950	11.6	11.8	11.8	12.2	129	200
1951-1955	13.1	12.2	13.4	13.0	113	181

Sources: Extracted from ROZNIK STATYSTYCZNY 1956, Warsaw 1956

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In contrast, the Western European countries during the postwar period have raised crop yields significantly above prewar levels. The yields of root crops which, relative to small grain, are more dependent upon proper cultivation methods and fertilization to maintain yields decreased during 1951-1955, the period of collectivization.

Agricultural policy in Poland, following the October 1956 change in political leadership, has made a radical departure from previous Communist policy. The role of raising agricultural productivity has fallen completely upon the shoulder of the independent peasant. Government emphasis on the means of increasing agricultural production has been shifted from supporting large farming units (collectives and state farms) and centralized control of planning to one of supporting small farms, decentralizing controls, and providing producer incentives.

Although the changes in agricultural policy are believed to be a major step in the proper direction of raising agricultural production levels, it will be several years before a proper evaluation of their effect on production can be determined. A number of the input and incentive factors and how they may have a favorable effect on production follows:

Institutional - Collectivization still remains an official goal, but at the same time force will not be used. Agricultural circles (self-governing peasant associations) are being established to supplement the collectivization program. So long as pressure is not applied, the peasant will not join collectives.

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This policy may create a more stable feeling of ownership on the part of the peasant so that he will have a desire to stay on the farm and do a better job. Partial success of this policy is evidenced by the increased costs of land and horses since 1 January 1957. De-centralization of planning, placing State farms on cost-accounting basis, and placing of technically competent personnel in managerial positions should have a favorable effect on agricultural production.

Investment and Credits - Government investment in agriculture is to increase from approximately 12 percent of total government investment in 1950-1955 to 18.1 percent during the period 1956-1960. In addition, greater investment is to be made in industries which support agriculture, e. g., chemical and agricultural machinery industries.

A larger percentage of the investment is to be directed into the private farming sector during the Five Year Plan than previously. Long term credits for private peasants have been increased and information indicates that the peasant is taking advantage of these credits. This was not true in 1956. However, it is likely that a large share of the money is being used for housing rather than for inputs directly affecting agricultural productivity such as machinery, fertilizer, and breeding animals. The Warsaw Embassy reports that for the first time in six or seven years, peasants are actively engaged in repairing and erecting new buildings.

Mechanization - The mechanization of farming operations is two-fold in purpose, (1) to save labor and (2) to increase crop yields. Poland has not

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been able to mechanize agriculture rapidly enough to replace the loss of farm labor as a result of the war (Western territories) and movement of labor to the cities. The machinery available has been concentrated in State Machine Centers (PCM) for the benefit of the collective sector. By official admission the PCMs have been operated inefficiently. Recent policy measures have been directed toward getting the machinery on the farms. Collectives and private peasants will now be able to purchase all types of agricultural machinery including tractors. The PCMs will continue to function but more as a secondary source for machinery and as repair depots. Also, the NIS is to service the private sector at less discriminatory costs for service rendered. In 1955, about 86 percent of the PCM's operations were performed on collectives, 8 percent for State farms, and only 6 percent for private farms.

Plans call for a shift in emphasis from the production of complicated agricultural machinery to that applicable to small size farms using animal draft power. It is possible that by 1960 the deliveries of machinery to agriculture will be adequate to raise grain yields in the Western territories by permitting more timely harvesting. The replacement of worn-out horse drawn equipment should contribute to improving the quality of field work and labor productivity on private farms.

Labor - In terms of numbers, there is an adequate farm labor force in Poland. However, it is not properly distributed: there is a surplus in the Eastern and Central areas and a deficit in Western territories. The Polish government has been trying to move the surplus farm labor from Old Poland to

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the recovered territories since 1948 with little success. During the past two years some success, directly related to concessions given, has been registered in resettling the recovered area. Repatriates from the USSR are presently making up a large percentage of the new settlers.

State farms in the Western territories have the greatest labor shortage. A small area of State farm land is to be returned to private owners who had been unjustly deprived of it—a measure intended to reduce fallow land area and improve efficiency of farm operations.

The rising cost of land in the Central and Eastern provinces indicates that the movement of farmers to the city may not be continuing at the same rate. The uncertain employment situation in industry may persuade some ex-farmers to return to their land.

Incentives - Recent policy changes with reference to ownership of land, sale of land, land taxes, prices paid for commodities and reduced compulsory deliveries are aimed at giving private farming a shot-in-the-arm. The greater share of the changes are related to improving the peasant's income and making farming profitable—a reversal of past policy. At the same time, building materials, machinery, fertilizer and consumer goods production and their availability to the countryside is planned to increase. The extent to which the government is successful in increasing production of these goods will have a direct bearing on the attitude of the peasant toward increasing production and the percentage of his produce marketed.

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The only measurable influence that recent policy changes have had on 1957 agricultural production is the increase in cultivated acreage. There has been an increase in the grain and a decrease in sugar beet acreage as compared to 1956. It is believed that the changes in delivery prices have brought about this change. Also, the peasant now has more freedom as to the choice of crops planted.

The 1957 harvest currently forecast as being one of the best since the war has resulted primarily from excellent weather conditions and to a lesser extent from recent agricultural policy changes. However, it is estimated that the peasant's confidence in his future has increased and that there are real prospects for an increase in agricultural production during the next five years given a continuation of current policies.

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Of the 2 million metric tons of nitrogenous fertilizers available in 1956, only 550,000 tons were produced in China. The remainder was furnished through imports, constituting a heavy drain on foreign exchange credits. The planned annual production goal of chemical fertilizers for 1962 is just over 3 million tons.

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